Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) A solid-state imaging device, comprising:

a pixel array having a plurality of pixels arranged in a matrix;

each of the pixels including:

a photo diode that generates carriers depending on the intensity of incident light;

an accumulation region that accumulates the generated carriers;

an insulated-gate output transistor that outputs a signal according to a threshold voltage that changes depending on a number of the carriers accumulated in the accumulation region; and

an insulated-gate clear transistor that discharges the carriers accumulated in the accumulation region, the accumulated carriers being discharged through a channel region of the clear transistor, and

the pixels each further including:

a pixel-forming region of a second conductivity type that is formed on a semiconductor substrate of a first conductivity type and where one of the pixels is formed;

a buried region of a first conductivity type that is formed in the pixel-forming region and that includes a first partial buried region formed at a relatively deep position and having a relatively low impurity concentration and a second partial buried region formed at a relatively shallow position and having a relatively high impurity concentration, a junction region between the first partial buried region and the pixel-forming region forming the photo diode, the second partial buried region forming the accumulation region; and

a discharging region of a first conductivity type that is formed in the pixel-forming region and into which carriers discharged from the accumulation region flow;

an output transistor that includes a first gate electrode that is formed over the pixel-forming region above the accumulation region through an insulating film; and

the clear transistor including a second gate electrode that is formed over the pixel-forming region between the buried region and the discharging region..

2.　　(Original)　The solid-state imaging device according to Claim 1, the accumulation region functioning as a source region of the clear transistor.

3.　　(Canceled)

4.　　(Currently Amended)　The solid-state imaging device according to ~~Claim 3~~Claim 1,

the first gate electrode having a substantially annular shape; and

the output transistor including:

a source region that is formed inside the first gate electrode; and

a drain region that is formed outside the first gate electrode.

5.　　(Currently Amended)　The solid-state imaging device according to ~~Claim 3~~Claim 1,

the pixel-forming region including:

a lower region that is formed below the buried region; and

a side region that is formed at a side of the buried region; and

an impurity concentration of the lower region being higher than an impurity concentration of the side region.

6.　　(Currently Amended)　The solid-state imaging device according to ~~Claim 3~~Claim 1,

the pixel-forming region including:

a lower region that is formed below the buried region; and

a side region that is formed at a side of the buried region; and

a thickness of the lower region being larger than a thickness of the side region.

7.   (Currently Amended) The solid-state imaging device according to ~~Claim 3~~Claim 1,

the first conductivity type being a p-type;

the second conductivity type being an n-type; and

the carriers being holes.

8.   (Withdrawn) A method of manufacturing a solid-state imaging device that includes a pixel array where pixels are arranged in a matrix, the pixels having a photo diode that generates carriers depending on an intensity of incident light, an accumulation region that accumulates the generated carriers, an insulated-gate output transistor that outputs a signal according to threshold voltage that changes depending on a number of carriers accumulated in the accumulation region, and an insulated-gate clear transistor that discharges carriers accumulated in the accumulation region, the accumulated carriers being discharged through a channel region of the clear transistor, the method comprising:

preparing a semiconductor substrate of a first conductivity type that includes a pixel-forming region of a second conductivity type where one of the pixels is formed and a buried region of a first conductivity type that is formed in the pixel-forming region, the buried region including a lower region formed at a relatively deep position and having a relatively low impurity concentration and an upper region formed at a relatively shallow position and having a relatively high impurity concentration, a junction region between the lower region and the pixel-forming region forming the photo diode;

forming a first gate electrode constituting an output transistor and a second gate electrode constituting the clear transistor, over the pixel-forming region through an insulating film, the first gate electrode being formed above the buried region, the second gate electrode being formed above an end of the buried region;

leaving the accumulation region having a relatively high impurity concentration below the first gate electrode by utilizing a region including the first gate electrode as a mask and doping an impurity in the upper region, the impurity inverting the conductivity type of the upper region; and

forming a discharging region of a first conductivity type into which carriers discharged from the accumulation region flow, in the pixel-forming region, the discharging region being formed in a region that faces the buried region through the second gate electrode.